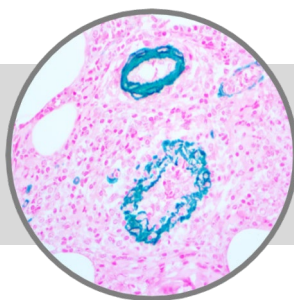


Actin, Smooth Muscle

Clone: BSB-15

Mouse Monoclonal



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Inset: IHC of Actin, Smooth Muscle on a FFPE Appendix Tissue

Intended Use

For In Vitro Diagnostic Use.

This antibody is intended for use in Immunohistochemical applications on formalin-fixed paraffin-embedded tissues (FFPE), frozen tissue sections and cell preparations. Interpretation of results should be performed by a qualified medical professional.

Immunogen

Synthetic peptide corresponding to the N-terminus of human smooth muscle actin.

Summary and Explanation

Actin is a major component of the cytoskeleton and is present in every cell type. Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells. In vertebrates 3 main groups of actin isoforms (alpha, beta and gamma) have been identified. The alpha actins are found in muscle tissues and are a major constituent of the contractile apparatus. The beta and gamma actins coexist in most cell types as components of the cytoskeleton and as mediators of internal cell motility.

Smooth-Muscle Actin antibody does not stain cardiac or skeletal muscle; however, it will stain myofibroblasts and myoepithelial cells. This antibody could be used together with Muscle-Specific Actin to distinguish Leiomyosarcoma from Rhabdomyosarcoma. In most cases of Rhabdomyosarcoma, this antibody gives negative results whereas M. S. Actin is positive in the rhabdomyoblasts. Leiomyosarcomas are positive with both M. S. Actin and S. M. Actin antibodies.

| | | | |
|---------------------------|------------------|-----------------------------------|------------------|
| Antibody Type | Mouse Monoclonal | Clone | BSB-15 |
| Isotype | IgG2a/K | Reactivity | Paraffin, Frozen |
| Localization | Cytoplasmic | Control | Appendix, Uterus |
| Species Reactivity | | Human, Mouse, Rat, Rabbit, Feline | |

Precautions

1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN₃) as a preservative. Ensure proper handling procedures are used with this reagent.
3. Always wear personal protective equipment such as laboratory coat, goggles and gloves when handling reagents.
4. Dispose of unused solution with copious amount of water.
5. Do not ingest reagent. If reagent is ingested, seek medical advice immediately.
6. Avoid contact with eyes. If contact occurs, flush with large quantities of water.
7. Follow safety precautions of the heating device used for epitope retrieval (TintoRetriever Pressure Cooker or similar).
8. For additional safety information refer to Safety Data Sheet for this product.
9. For complete recommendations for handling biological specimens, please refer to the CDC document, "Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories" (see References in this document).

Presentation

S. M. Actin is a mouse monoclonal antibody derived from cell culture supernatant that is concentrated, dialyzed, filter sterilized and diluted in buffer pH 7.5, containing BSA and sodium azide as a preservative.

| <i>Catalog No.</i> | <i>Antibody Type</i> | <i>Dilution</i> | <i>Volume/Qty</i> |
|--------------------|----------------------|-----------------|-------------------|
| BSB 5029 | Tinto Prediluted | Ready-to-Use | 3.0 mL |
| BSB 5030 | Tinto Prediluted | Ready-to-Use | 7.0 mL |
| BSB 5031 | Tinto Prediluted | Ready-to-Use | 15.0 mL |
| BSB 5032 | Concentrated | 1:250 - 1:1000 | 0.1 mL |
| BSB 5033 | Concentrated | 1:250 - 1:1000 | 0.5 mL |
| BSB 5034 | Concentrated | 1:250 - 1:1000 | 1.0 mL |

Control Slides Available

| <i>Catalog No.</i> | <i>Quantity</i> |
|--------------------|-----------------|
| BSB 5035 | 5 slides |

Storage Store at 2-8°C (Control Slides: Store at 20-25°C)

Stability

This product is stable up to the expiration date on the product label. Do not use after expiration date listed on package label. Temperature fluctuations should be avoided. Store appropriately when not in use, and avoid prolonged exposure to room temperature conditions.

Specimen Preparation

Paraffin sections: The antibody can be used on formalin-fixed paraffin-embedded (FFPE) tissue sections. Ensure tissue undergoes appropriate fixation for best results. Pre-treatment of tissues with heat-induced epitope retrieval (HIER) is recommended using Bio SB ImmunoDNA Retriever with Citrate (BSB 0020-BSB 0023), ImmunoDNA Retriever with EDTA (BSB 0030-BSB 0033) or ImmunoDNA Digestor (BSB 0108-0112). See reverse side for complete protocol. Tissue should remain hydrated via use of Bio SB Immuno/DNA Washer solutions (BSB 0029 & BSB 0042).

Frozen sections and cell preparations: The antibody can be used for labeling acetone-fixed frozen sections and acetone-fixed cell preparations.

Staining Procedure

1. Cut and mount 3-5 micron formalin-fixed paraffin-embedded tissues on positively charged slides such as Bio SB Hydrophilic Plus Slides (BSB 7028).
2. Air dry for 2 hours at 58° C.
3. Deparaffinize, dehydrate and rehydrate tissues.
4. Subject tissues to heat induced epitope retrieval (HIER) using a suitable retrieval solution such as ImmunoDNA Retriever with Citrate (BSB 0020-BSB 0023) or EDTA (BSB 0030-BSB 0033).
5. Any of three heating methods may be used:

a. TintoRetriever Pressure Cooker or Equivalent

Place tissues/slides in a staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA, and place on trivet in the pressure cooker. Add 1-2 inches of distilled water to the pressure cooker and turn heat to high. Incubate for 15 minutes. Open and immediately transfer slides to room temperature.

b. TintoRetriever PT Module or Water Bath Method

Place tissues/slides in a pre-warmed staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA at 95°-99° C. Incubate for 30-60 minutes.

c. Conventional Steamer Method

Place tissues/slides in a pre-warmed staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA in a steamer, cover and steam for 30-60 minutes.

6. After heat treatment, transfer slides in ImmunoDNA Retriever with Citrate or EDTA to room temperature and let stand for 15-20 minutes.
7. For manual staining, perform antibody incubation at ambient temperature. For automated staining methods, perform antibody incubation according to instrument manufacturer's instructions.
8. Wash slides with ImmunoDNA washer or DI water.
9. Continue IHC staining protocol. Wash slides between each step with ImmunoDNA washer solution.





Abbreviated Immunohistochemical Protocol

| Step | ImmunoDetector AP/HRP | PolyDetector AP/HRP | PolyDetector Plus HRP |
|--------------------------|-----------------------|---------------------|-----------------------|
| Peroxidase/AP Blocker | 5 min. | 5 min. | 5 min |
| Primary Antibody | 30-60 min. | 30-60 min. | 30-60 min. |
| 1st Step Detection | 10 min. | 30-45 min. | 15 min. |
| 2nd Step Detection | 10 min. | Not Applicable | 15 min. |
| Substrate-Chromogen | 5-10 min. | 5-10 min. | 5-10 min. |
| Counterstain / Coverslip | Varies | Varies | Varies |

References

1. Cooke PH, J Cell Biol. 1976;68-539-556
2. Skalli O, et al. J Cell Biol. 1986;103:2787-2796
3. Gown AM, et al. J Cell Biol. 1985;100:807-813
4. Kuroda M, Biochem Biophys Acta. 1985;843:20-213
5. Lazarides E, J Histochem Cytochem. 1975;223:507-52
6. U.S. Department of Health and Human Services: Centers for Disease Control and Prevention. Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories. Supplement / Vol. 61, January 6, 2012.

Symbol Key / Légende des symboles/Erläuterung der Symbole

| | | | | | | | |
|---------------|--|---|--|---|--|------------|---|
| EC REP | EMERGO EUROPE Prinsessegracht 20 2514 AP The Hague The Netherlands |  | Storage Temperature Limites de température Zulässiger Temperaturbereich |  | Manufacturer Fabricant Hersteller | REF | Catalog Number Référence du catalogue Bestellnummer |
| IVD | In Vitro Diagnostic Medical Device Dispositif médical de diagnostic in vitro In-Vitro-Diagnostikum |  | Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten |  | Expiration Date Utiliser jusque Verwendbar bis | LOT | Lot Number Code du lot Chargenbezeichnung |

Performance Characteristics

| Normal Tissues | |
|---------------------|--------------|
| Positive (+) | |
| Appendix | 15/15 (100%) |
| Myometrium | 15/15 (100%) |
| Negative (-) | |
| Normal Schwan cells | 0/6 (0%) |
| Abnormal Tissues | |
| Positive (+) | |
| Leiomyomas | 12/14 (85%) |
| Leiomyosarcomas | 5/6 (83%) |
| Negative (-) | |
| Schwanomas | 0/6 (0%) |
| Liposarcomas | 0/4 (0%) |

Mounting Protocols

For detailed instructions using biodegradable permanent mounting media such as XyGreen PermaMounter (BSB 0169-0174) or organic solvent based resin such as PermaMounter (BSB 0094-0097), refer to PI0174 or PI0097.

Product Limitations

Due to inherent variability present in immunohistochemical procedures (including fixation time of tissues, dilution factor of antibody, retrieval method utilized and incubation time), optimal performance should be established through the use of positive and negative controls. Results should be interpreted by a qualified medical professional.



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